

(12) UK Patent Application (19) GB (11) 2 381 260 (13) A

(43) Date of A Publication 30.04.2003

(21) Application No 0125747.6

(22) Date of Filing 26.10.2001

(71) Applicant(s)
The Mead Corporation
(Incorporated in USA - Ohio)
Courthouse Plaza NE, Dayton, Ohio 45463,
United States of America

(72) Inventor(s)
Jean-Michel Auclair

(74) Agent and/or Address for Service
Hepworth Lawrence Bryer & Bizley
Bloxam Court, Corporation Street,
RUGBY, Warwickshire, CV21 2DU,
United Kingdom

(51) INT CL⁷
B65D 71/00

(52) UK CL (Edition V)
B8P PK3
U1S S1808

(56) Documents Cited
GB 2201950 A

(58) Field of Search
UK CL (Edition T) **B8P PE1A PE1X PE2A PK3**
INT CL⁷ **B65D 71/00**
Other: **ONLINE:WPI,EPODOC,JAPIO**

RECEIVED
MEADWESTVACO CORPORATION

MAY 23 2003

LAW DEPARTMENT
SMYRNA, GA

US 4217983 A

(54) Abstract Title
Basket type article carrier

(57) An article carrier of the basket type is adapted to accommodate a plurality of articles, such as bottles. The carrier comprises a base (14, 18), opposed side (12, 20) and end walls (50, 52; 82, 84) and internal medial partition structure (74, 78) and handle means (H) by which the carrier can be lifted and carried. The bottles are received on both sides of the medial partition structure of the carrier. A pair of securing flaps (114, 116) are hinged to the medial partition structure and are secured to an end wall (84) of the carrier to create a joint between the medial partition structure and that end wall. The medial partition structure is formed from a pair of medial partition panels (74, 78) hinged together along a first fold line (80). The first fold line is disposed inwardly of the carrier from the same end wall (84) relative to a pair of second fold lines (118, 120) by which the securing flaps are hinged to one (74) of the pair of medial partition panels.

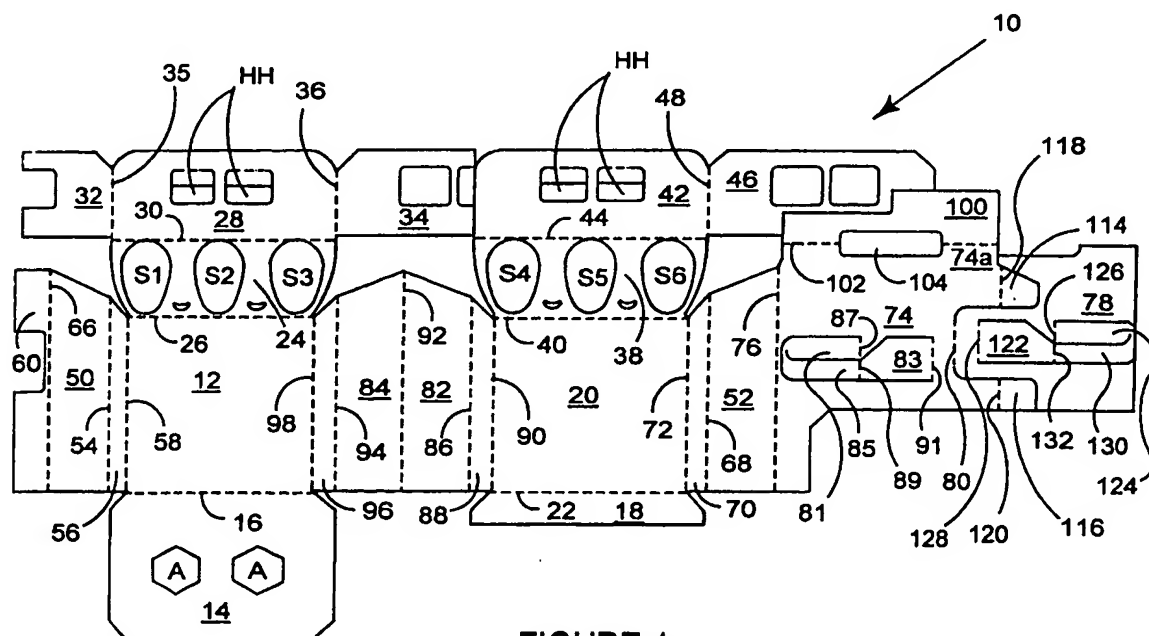


FIGURE 1

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

This print takes account of replacement documents submitted after the date of filing to enable the application to comply with the formal requirements of the Patents Rules 1995

GB 2 381 260 A

THIS PAGE BLANK (USPTO)

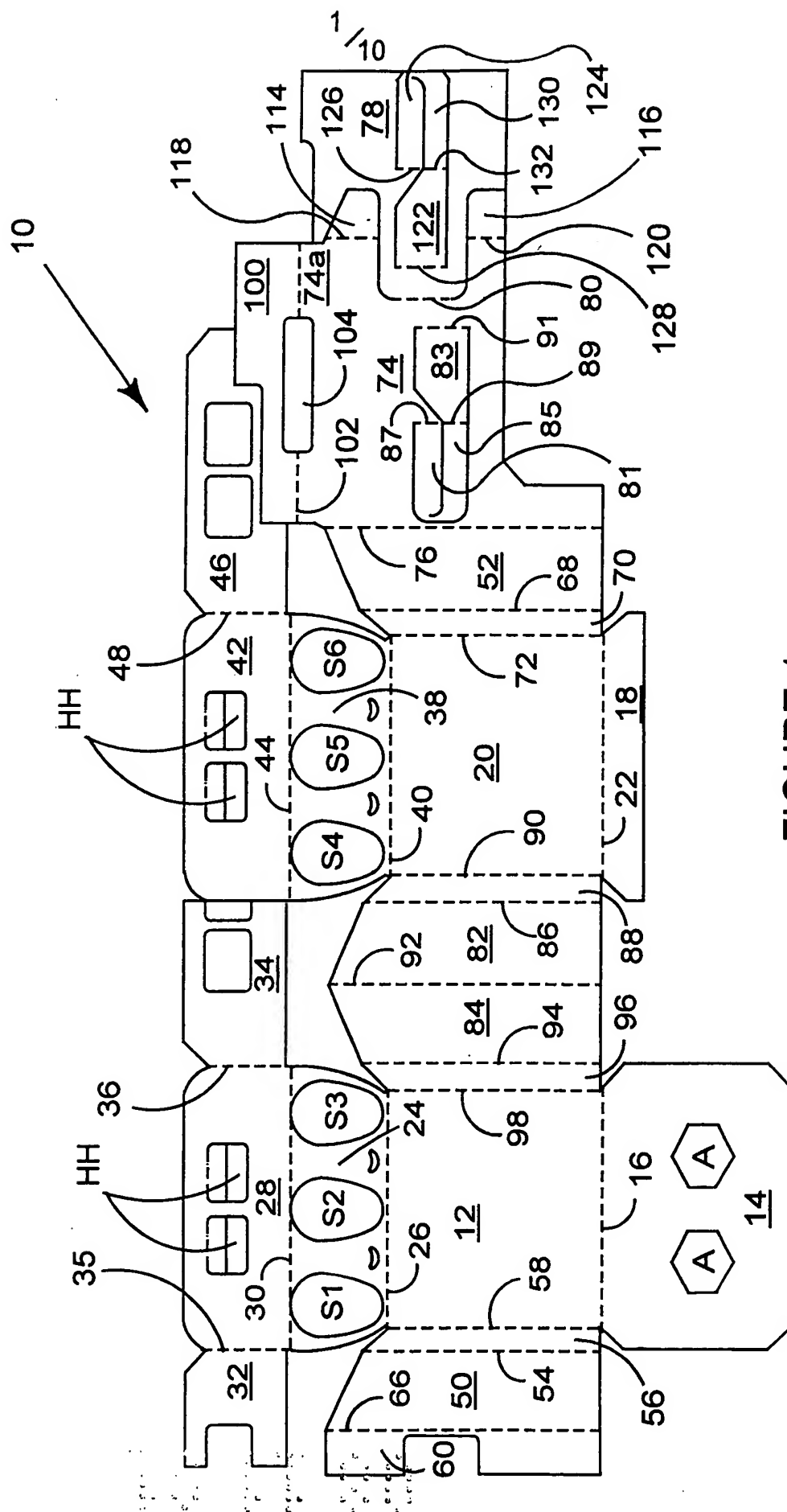


FIGURE 1

THIS PAGE BLANK (USPTO)

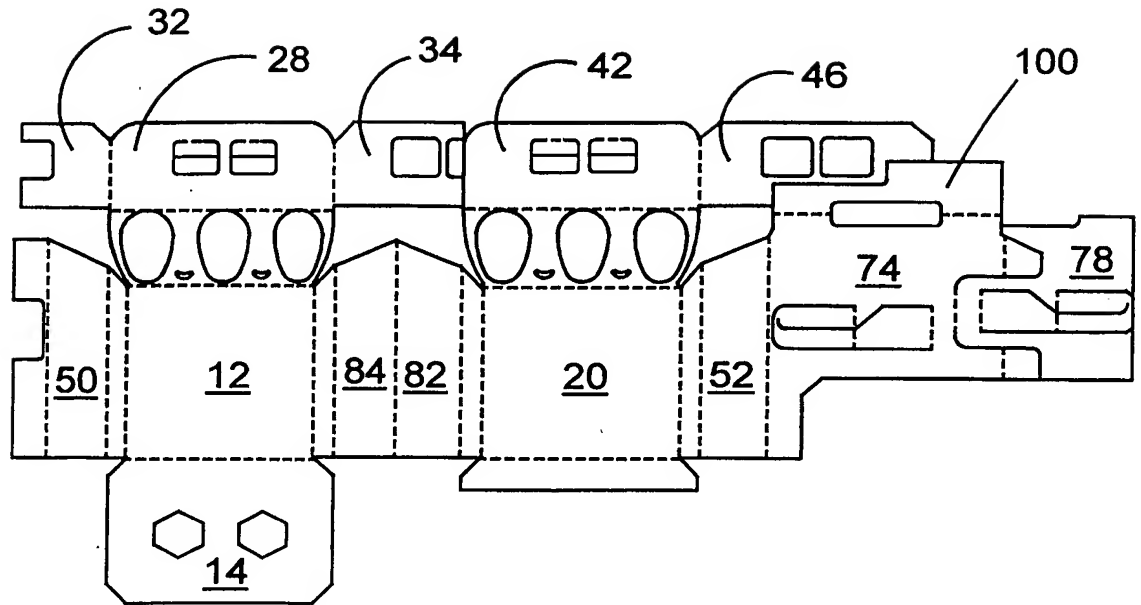


FIGURE 2

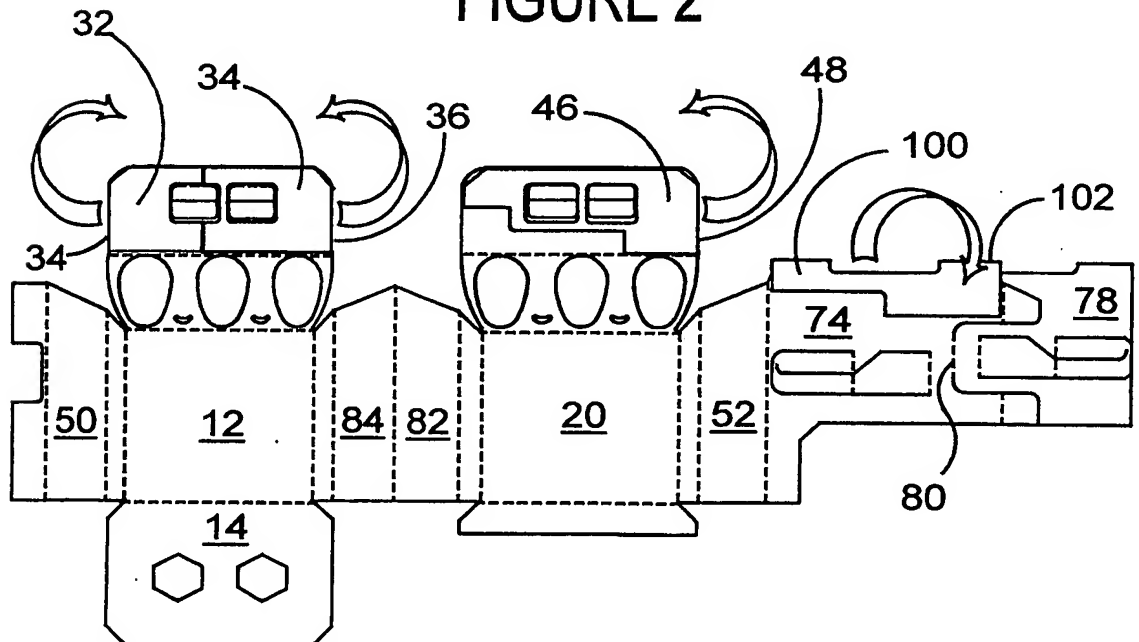


FIGURE 3

THIS PAGE BLANK (USPTO)

3/10

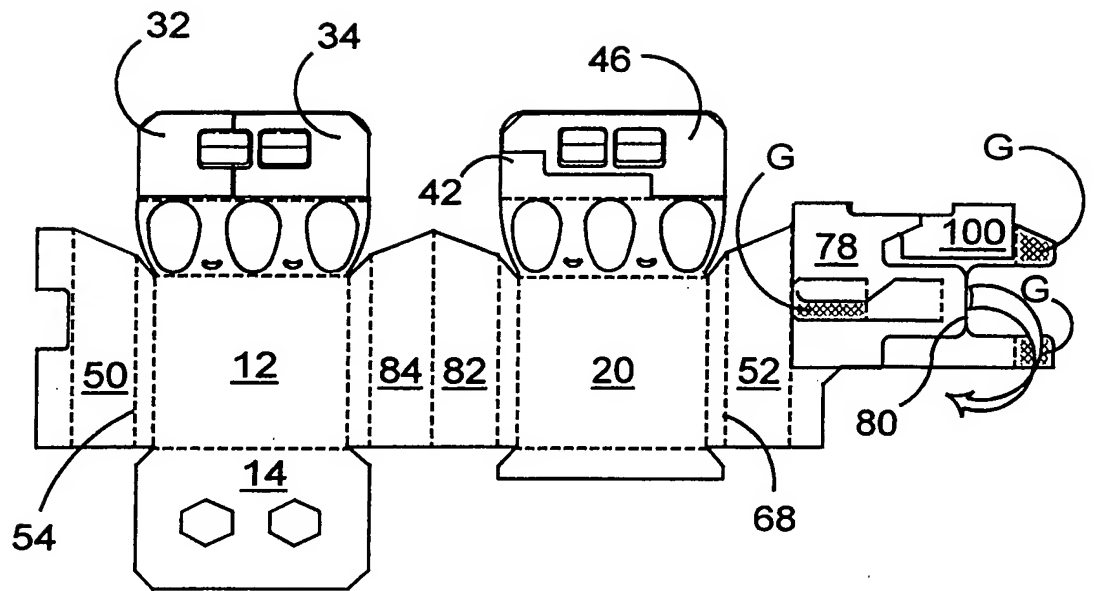


FIGURE 4

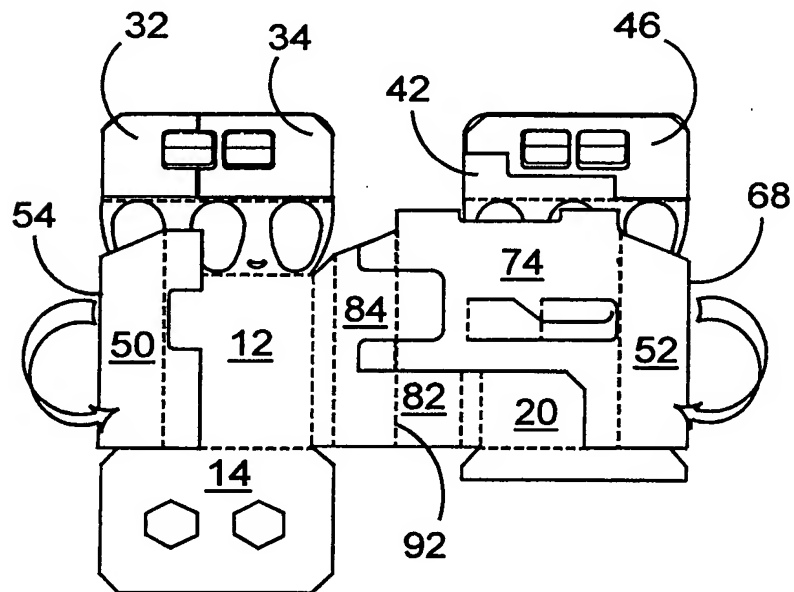


FIGURE 5

THIS PAGE BLANK (USPTO)

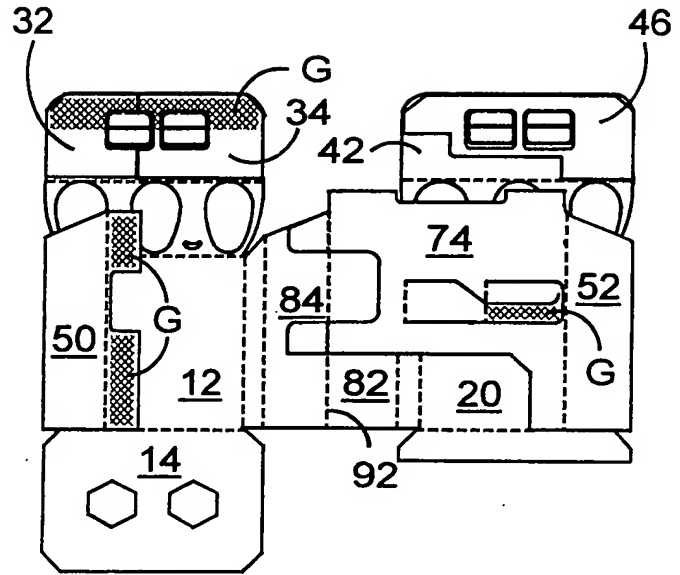


FIGURE 6

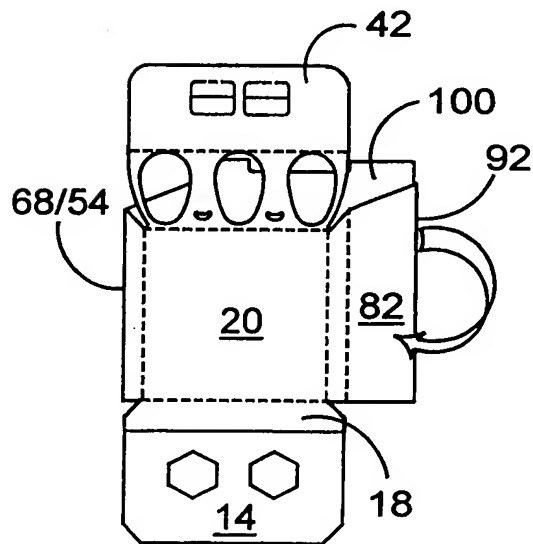
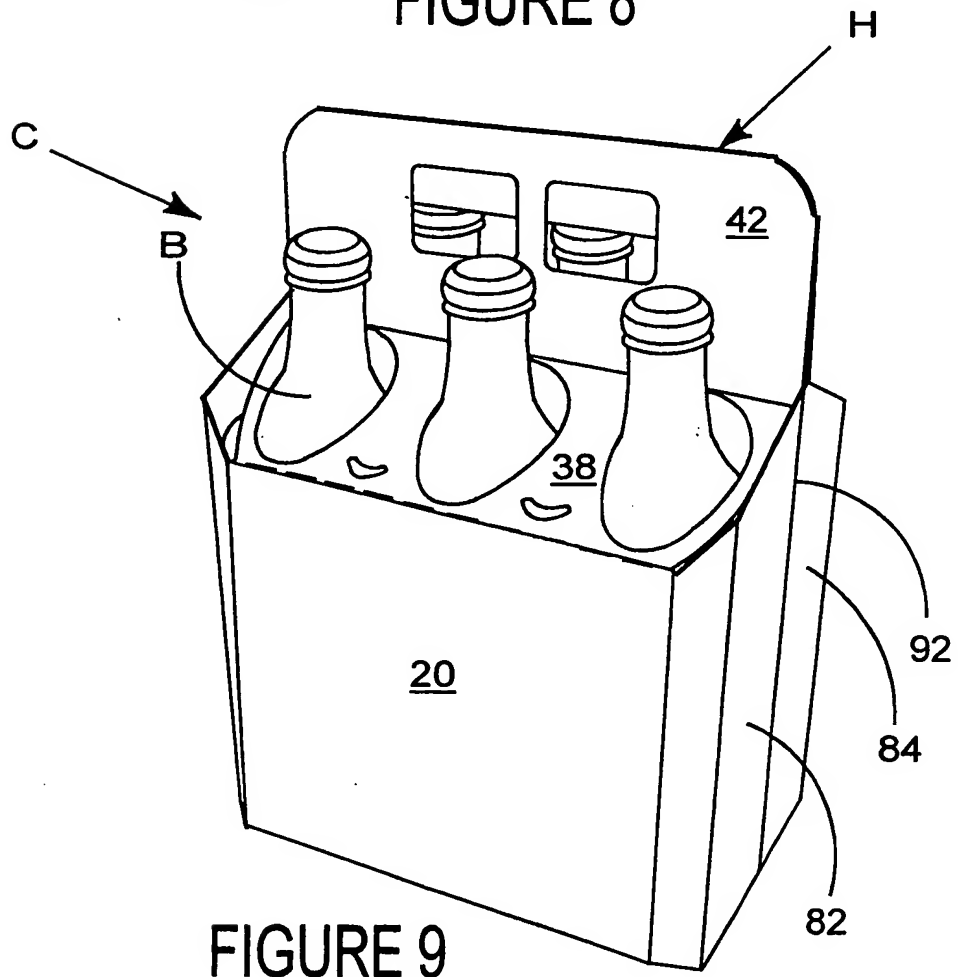
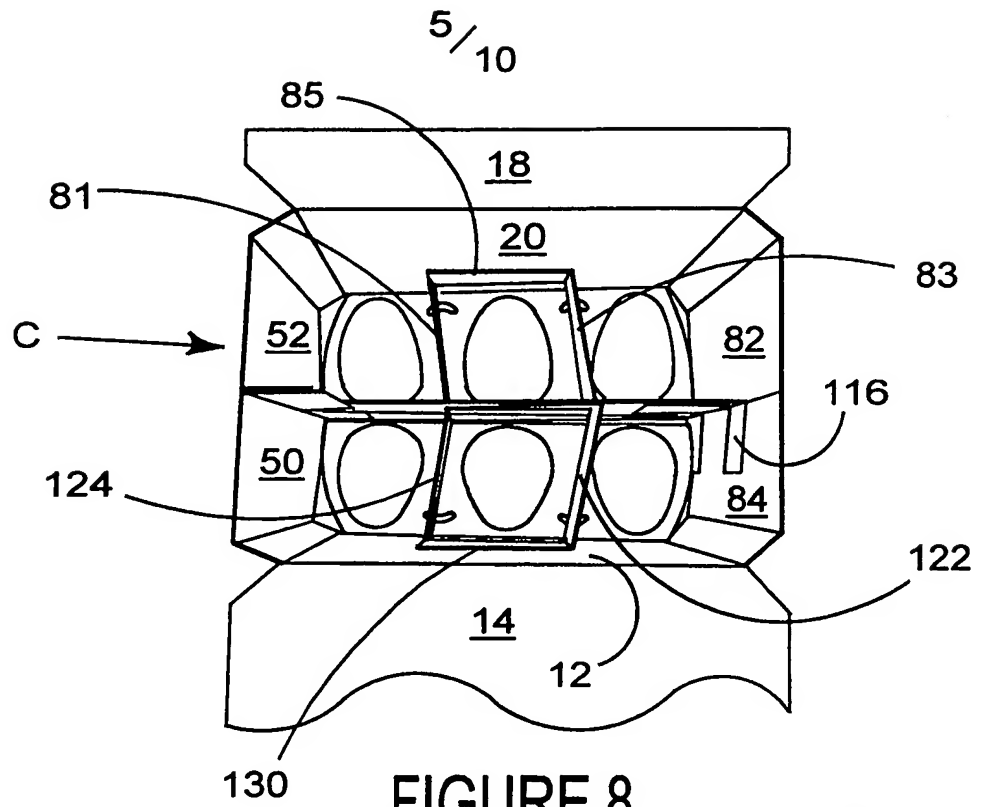


FIGURE 7

THIS PAGE BLANK (USPTO)



THIS PAGE BLANK (USPTO)

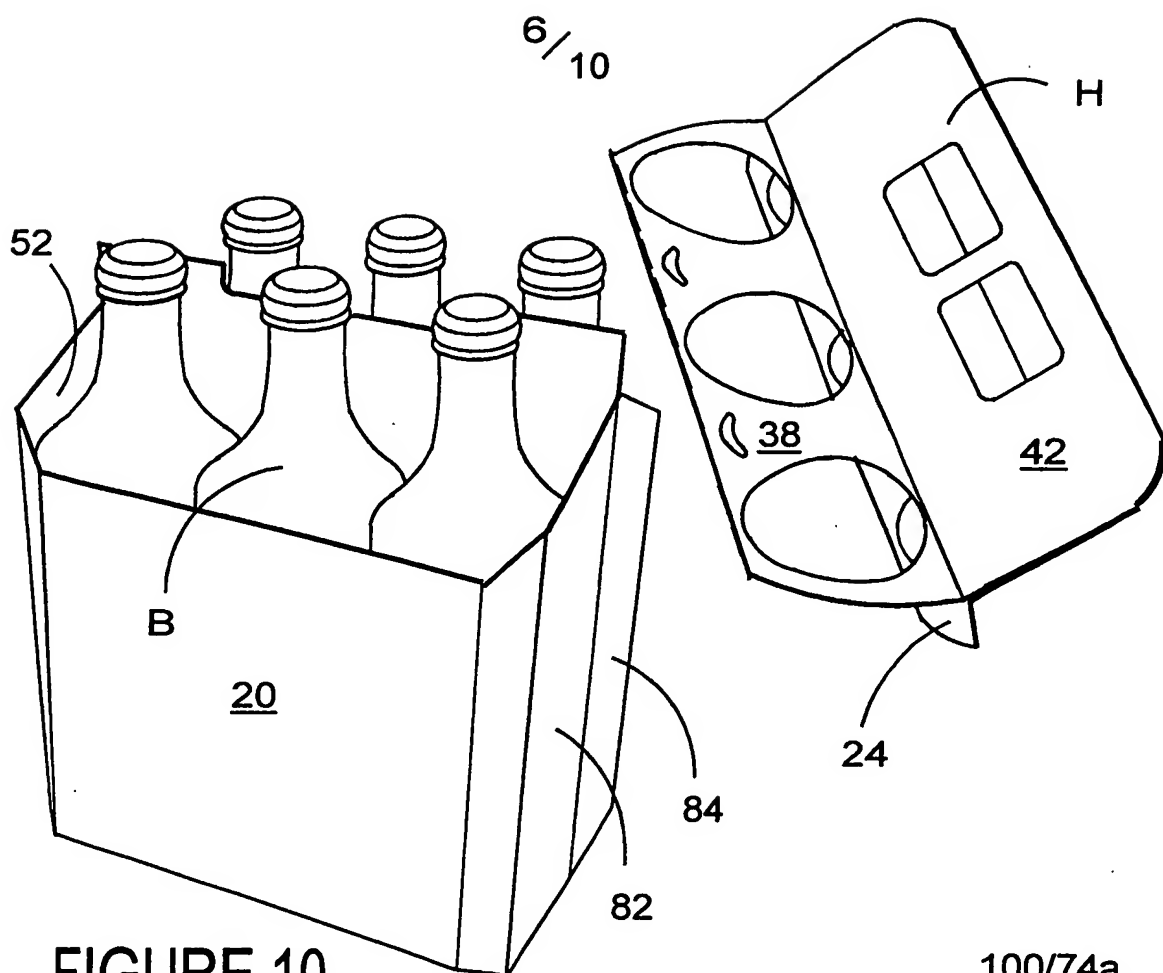


FIGURE 10

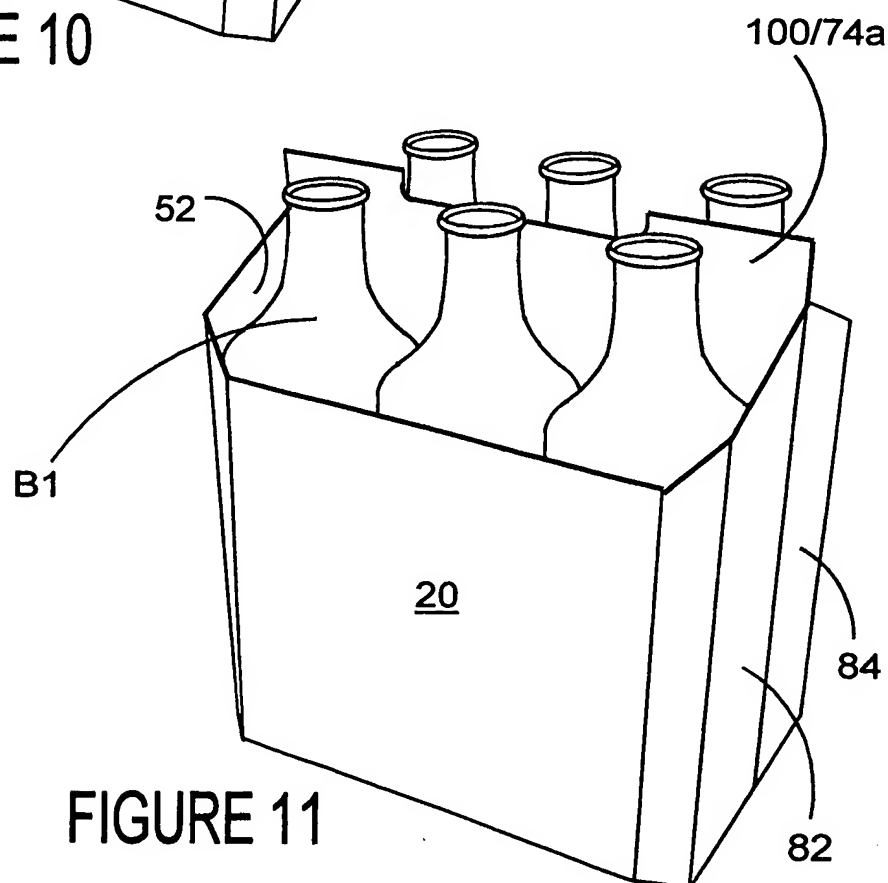


FIGURE 11

....3 PAGE BLANK (USPTO)

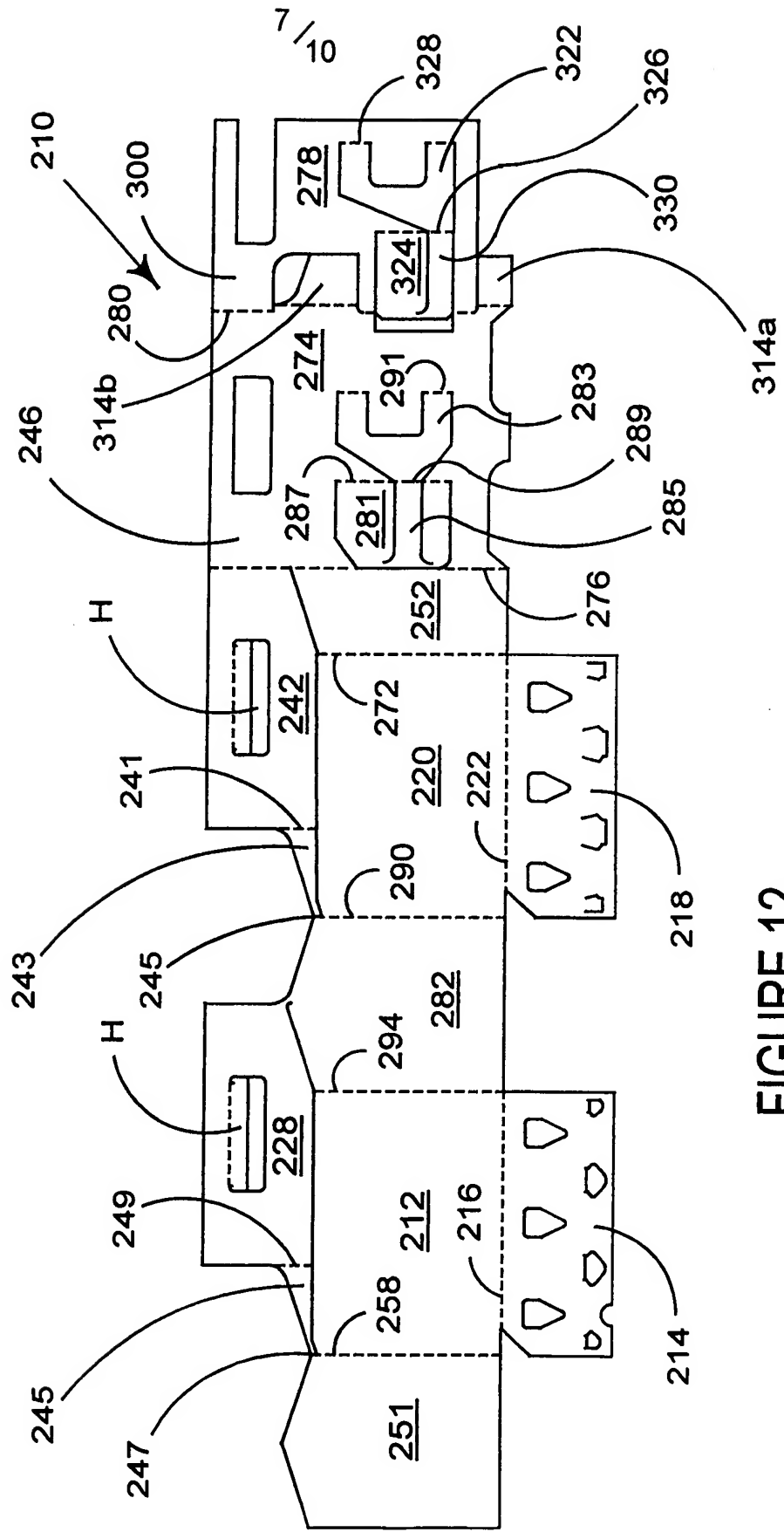


FIGURE 12

THIS PAGE BLANK (USPTO)

8/10

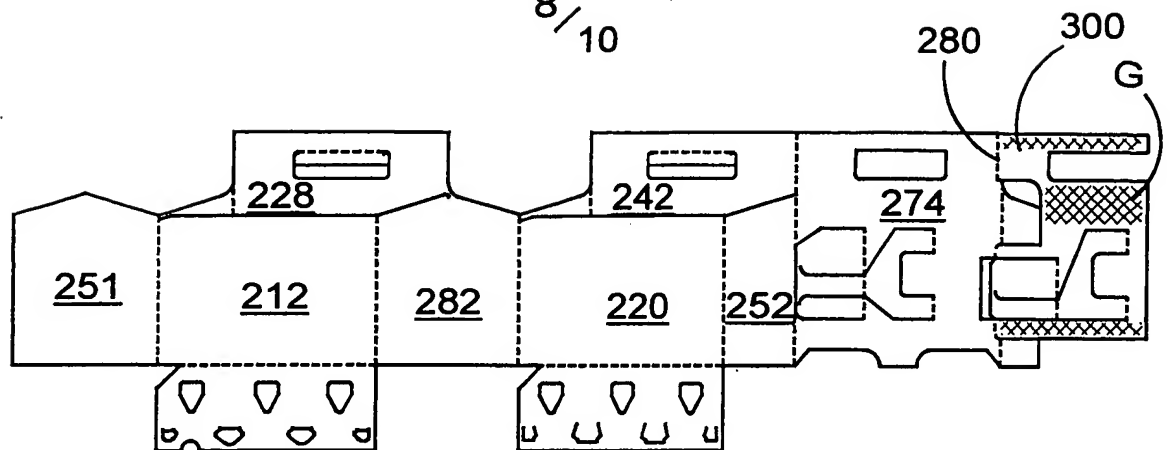


FIGURE 13

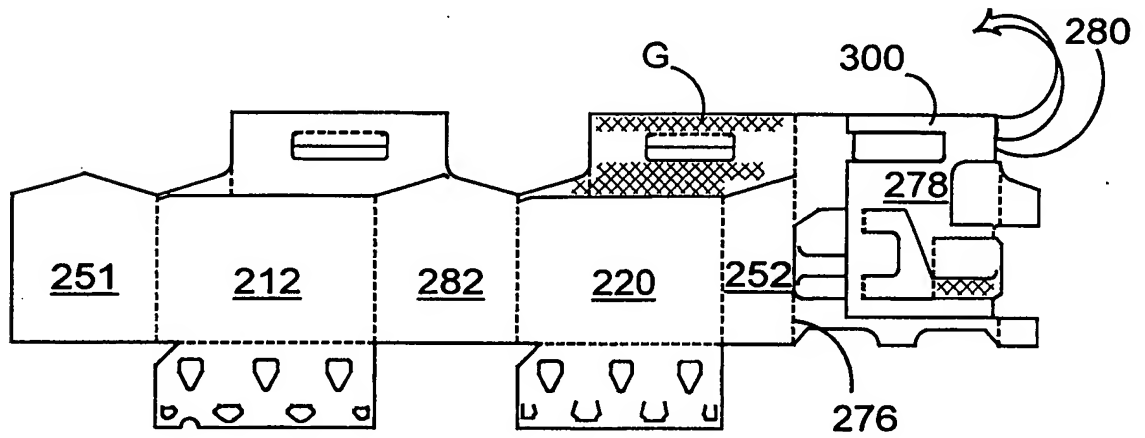


FIGURE 14

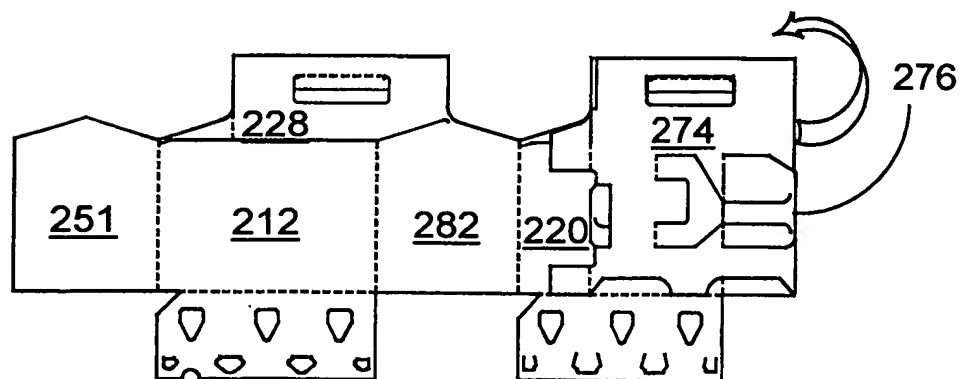


FIGURE 15

THIS PAGE BLANK (USPTO)

9/10

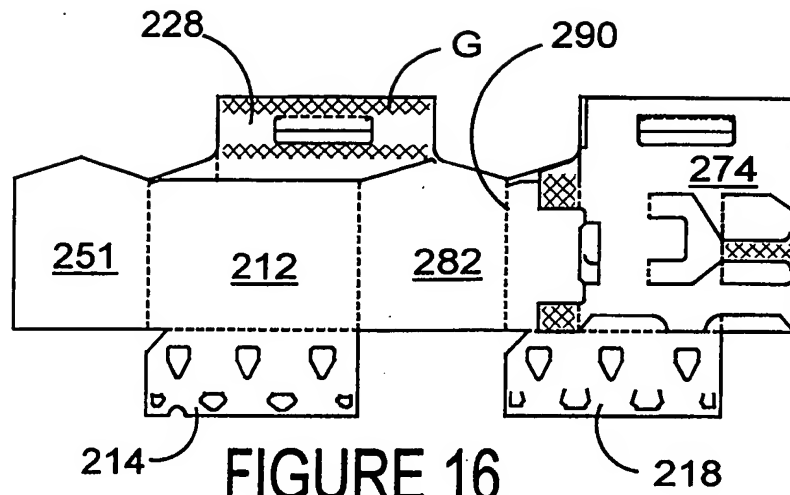


FIGURE 16

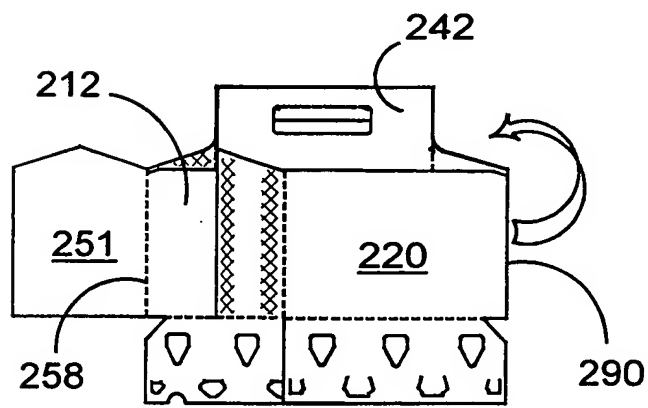


FIGURE 17

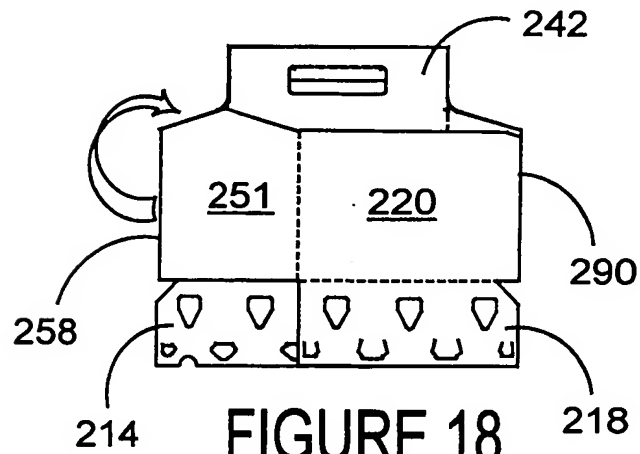


FIGURE 18

THIS PAGE BLANK (USPTO)

10/10

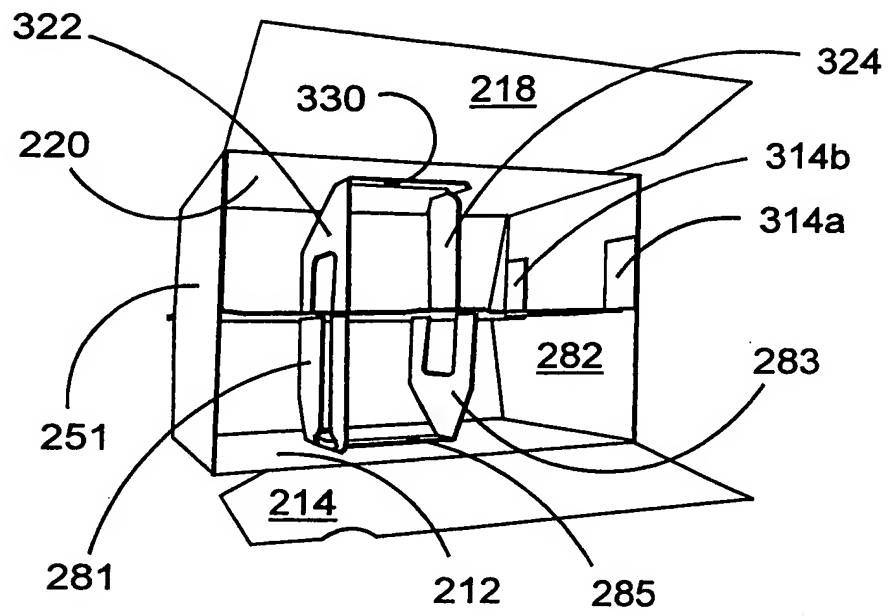


FIGURE 19

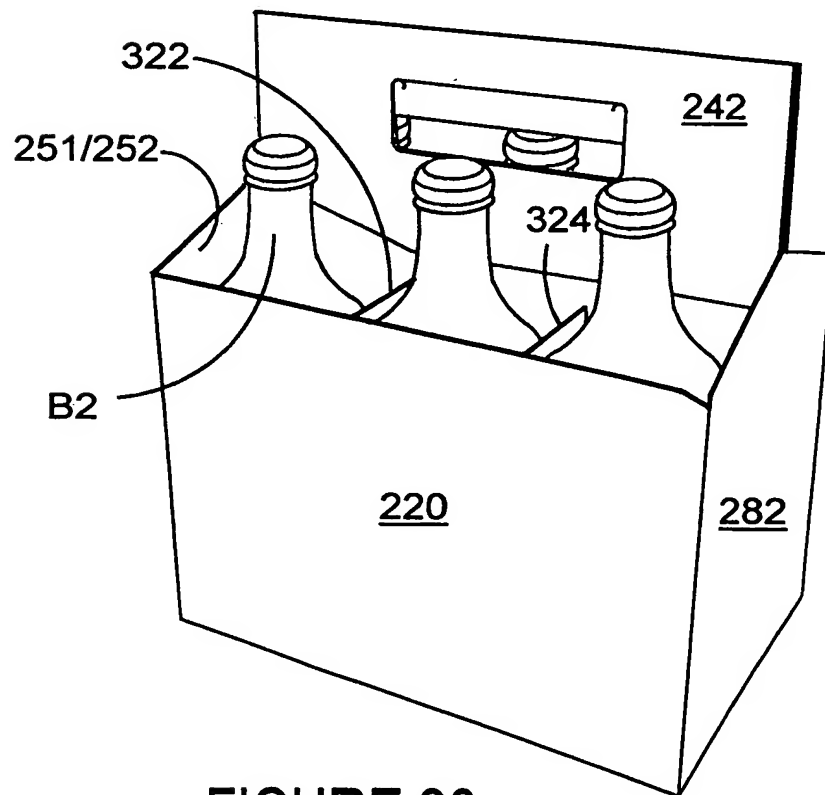


FIGURE 20

THIS PAGE BLANK (USPTO)

BASKET CARRIER FOR BOTTLES AND BLANK THEREFOR

This invention relates to an article carrier of the basket type formed from paperboard
5 which carrier is adapted to accommodate a plurality of articles, such as bottles, and to
a blank for forming the carrier.

Normally a basket carrier for bottles includes a central (medial) partition structure
which incorporates a handle structure by which the carrier can be lifted and carried
10 and the bottles are arranged in rows on either side of the central partition structure.
More often than not the bottles are separated from one another by transverse partition
panels extending from each side of the medial partition structure to the adjacent side
wall of the carrier. Hence in this type of arrangement the bottles are accommodated in
individual cells of the carrier although such cells are not always essential.

15

In the present invention, a new internal partition structure is provided which gives
savings in the amount of paperboard used in the construction of the carrier, but also
gives a rigid internal partition structure.

20 In one embodiment of the present invention, in order to prevent individual bottles
from being removed from the carrier the bottles are restrained by cover panels which
can be detached after the full carrier has been purchased. The cover panels also help
to keep the bottles dust free.

One aspect of the invention provides an article carrier of the basket type adapted to accommodate a plurality of articles, such as bottles, comprises a base, opposed side and end walls, an internal medial partition structure and handle means by which the carrier can be lifted and carried, said articles being receivable on both sides of said medial partition structure of the carrier wherein a securing flap hinged to the medial partition structure is secured to an end wall of the carrier to create a joint between said medial partition structure and that end wall and wherein said medial partition structure is formed from a pair of medial partition panels hinged together along a first fold line and wherein the first fold line is disposed inwardly of the carrier from said end wall relative to a second fold line by which said securing flap is hinged to one of the pair of medial partition panels. In some constructions, the first fold line may be disposed between opposed end edges of the said one of the pair of medial panels and the second fold line is disposed along one of the opposed end edges of that said one medial partition panel. Preferably, the first and second fold lines are disposed in parallel with one another.

Another aspect of the invention provides a blank for forming an article carrier of the basket type which blank comprises a series of main panels hinged one to the next for forming the side panels and the end panels of the carrier, a base and a handle structure and wherein the blank includes at one end thereof panels to form a medial partition structure of the carrier, said panels comprising a first medial partition panel from which is struck transverse partition panel means to be secured to one side wall of the carrier and a securing flap hinged to one end of the first medial partition, a second

medial partition panel, from which is struck transverse partition panel means to be secured to the other side wall of the carrier, wherein the first and second medial partition panels are hinged together and wherein its transverse partition panel means is struck partially from the first medial partition panel.

5

Embodiments of the invention will now be described, by way of example, with reference to the accompanying drawings, in which:-

Figures 1 and 2 are plan views of an unfolded single blank of paperboard from which
10 a bottle carrier according to one embodiment of the invention is formed;

Figures 3 to 7 show sequential steps in forming the carrier from the blank of Figures 1 and 2;

15 Figure 8 shows the completed and erect carrier from below prior to loading;

Figure 9 shows the completed and loaded carrier;

Figure 10 shows the carrier with the upper panels removed;

20

Figure 11 shows the carrier with used bottles for return to a point of sale;

Figures 12 and 13 are plan views of an unfolded single blank of paperboard from which another carrier according to the invention is formed;

Figures 14 to 18 show sequential step in forming the carrier from the blank of Figures 12 and 13;

- 5 Figure 19 shows the completed carrier of blank 12 from below before the base panels are closed and locked together; and

Figure 20 shows the completed and loaded carrier formed from the blank of Figure 12.

10

Referring to the drawings, and particularly to Figures 1 and 2 thereof, a bottle carrier "C" is formed from a single blank 10 of paperboard or other suitable foldable sheet material and is adapted to accommodate six bottles "B" (Figure 9) arranged in two rows of three bottles each.

15

The carrier comprises a first side wall panel 12 to the lower edge of which is hinged a main base panel 14. Base panel 14 is hinged to side wall panel 12 along fold line 16. Base panel 14 is formed with a pair of apertures "A" which allow the carton to be received in a bottle crate having upstanding partition posts. To complete the base of
20 the carrier, when the carrier is formed, the free edge of base panel 14 is secured to a base strip 18. This is done after the carrier is loaded with bottles. Base strip 18 is hinged to the lower edge of a second opposing side wall panel 20 of the carrier along a fold line 22.

The upper portions of each of the side wall panels 12 and 20 respectively, are similar. Thus the upper portion of side wall panel 12 includes an integral top panel 24 which covers the bottle receiving cells along one side of the handle structure H but includes a series of openings S_1 to S_3 through which neck portions of bottles accommodated in those cells protrude. Top panel 24 is hinged to side wall panel 12 along a frangible score line 26 and is also integral with and hinged to a handle panel 28 along fold line 30 which, in turn, has hinged to it first and second handle reinforcing flaps 32 and 34 along score lines 35 and 36 respectively. Thus, in use, the top panel 24 can be torn away along the frangible score line 26 and detached, at least partially, to allow bottles in the underlying cells to be taken from the carrier. Handle panel 28 includes handle openings HH which is reinforced by hinged handle flaps 32 and 34 with registering openings.

Similarly, the upper portion of side wall panel 20 includes an integral top panel 38 which covers the bottle receiving cells on the opposite side of the handle structure H and includes a series of openings S_4 to S_6 through which neck portions of bottles accommodated in those cells protrude. Top panel 38 is hinged to side wall panel 20 along a frangible score line 40 and is also integral with and hinged to a second handle panel 42 along score line 44. Thus, in use, the top panel 38 can be torn away along the frangible score line 40 and at least partially detached to allow bottles in the underlying cells to be taken from the carrier. Handle panel 42 includes handle openings HH and is reinforced by a handle flap 46 hinged along fold line 48. Handle openings in handle flap 46 are put into registry with handle openings HH when handle structure H is formed.

One end of the carrier is provided by end panels 50 and 52 respectively. End panel 50 is hinged along fold line 54 to intermediate panel 56 which provides a bevelled corner panel between side panel 12 and end panel 50. Panel 56 is hinged to side panel 12 along fold line 58. Along its opposite end edge panel 50 is hinged to medial panel strip 60 along fold line 66.

Similarly, end panel 52 is hinged along fold line 68 to intermediate panel 70 which provides another bevelled corner panel of the carrier between side panel 20 and end panel 52. Panel 70 is hinged to side panel 20 along fold line 72. Along its opposite end edge panel 52 is hinged to main medial panel 74 along fold line 76. Main medial panel 74 is hinged to a secondary medial panel 78 along fold line 80 and forms a part of the central internal structure of the carrier beneath the handle structure H.

The opposite end of the carrier is provided by end panels 82 and 84 respectively. End panel 82 is hinged along fold line 86 to intermediate panel 88 which provides a bevelled corner panel between side panel 12 and end panel 82. Panel 88 is hinged to side panel 20 along fold line 90. Along its opposite edge, panel 82 is hinged along fold line 92 to an adjacent end panel 84. Similarly, end panel 84 is hinged along fold line 94 to intermediate panel 96 which provides a bevelled corner panel between side panel 12 and end panel 84. Panel 96 is hinged to side panel 12 along fold line 98.

The construction of the medial panels 74 and 78 respectively, is as follows:

Medial panel 74 comprises an integral handle panel portion 74a to which is hinged a reinforcing handle panel 100 along fold line 102 which is folded into face to face relationship with panel portion 74a. From both these panels is struck handle aperture 104 adjacent the upper edge of the reinforced panel 74. In order to create partitions which, in part, define one row of individual cells of the carrier, a pair of transverse partition panels 81 and 83 are struck from and hinged to the main medial panel 74 along fold lines 87 and 91 respectively. The opposite ends of the transverse partition panels are joined to one another by a common anchoring panel 85 along fold line 89.

10 Further anchoring tabs 114 and 116 are hinged to the extreme end edge of main medial panel 74 at spaced locations along fold lines 118 and 120, respectively.

Medial panel 78 is hinged to medial panel 74 along fold line 80 disposed between but longitudinal (of the blank) displaced from fold lines 118 and 120. In order to create further partitions which, in part, define the other row of individual cells of the carrier, a pair of transverse partition panels 122, 124 are struck from and hinged to the secondary medial panel 78 along fold lines 126 and 128 respectively. The opposite ends of the transverse partition panels are joined to one another by a common anchoring panel 130 along fold line 132.

20

In order to form the completed carrier in flat collapsed condition from the blank, a series of sequential folding and gluing operations are required. Although these operations are known to those skilled in the art, in this particular case, first the handle reinforcing panel 46 is folded about fold line 48 and secured in face to face

relationship with handle panel 42. Handle structure reinforcing panels 32 and 34 likewise are folded and secured in face to face relationship with handle panel 28. Likewise reinforcing panel 100 is folded about fold line 102 and secured in face to face relationship with the upper panel portion 74a of main medial panel 74 (Figure 3).

5

Referring to Figure 4, secondary medial panel 78 is folded 180° to the left about fold line 80 into face to face relationship with medial panel 74. Glue is then applied to areas G comprising anchor panels 87, 114 and 116 respectively.

- 10 Medial panel structure 74, 78 is folded 180° to the left about fold line 68 whereby the common anchoring panel 85 is adhered to side wall panel 20 and anchoring tabs 114, 116 are secured in face to face relationship with end wall panel 84. Similarly, end wall structure 50, 60 is folded 180° to the right about fold line 54 into face to face relationship with side wall panel 28. The part assembled blank is now in the form
- 15 shown in Figure 5.

- Referring to Figure 6, glue is then applied to areas G comprising the upper parts of reinforcing panels 32, 34; the medial panel strip 60 and the anchoring panel 130. Thereafter, as shown in Figure 7, the partially formed carrier is folded about the now
- 20 central fold line 92 to bring those parts on either side of the central fold line 92 into face to face relationship whereby anchor panel 130 is adhered to side wall panel 12; handle reinforcing panels 46, 32, 34 are adhered together and medial panel strip 60 is adhered to the exposed face of end wall panel 52. The carrier is then in a flat collapsed form from which it can be erected for loading.

Loading is accomplished by relative vertical movement between bottles and carrier during common forward feed movement, well known in the art, by which bottles enter their respective cells through the open bottom of the carrier (Figure 8). Thereafter, the
5 bottom panel 14 is folded upwards to close the lower ends of the bottle cells and the free edge of bottom panel 14 is secured in overlapping relationship with the free edge of securing strip 18 to form the base of the carrier and hence the loaded carrier is complete (Figure 9).

10 As shown in Figure 10, in order to gain access to the contents of the carrier C, the top comprising handle structure H and top panels 24 and 38 are removed by tearing along the frangible fold lines 26 and 40 in order to expose the bottles. However, this action does not destroy the overall integrity of the carrier so that empty bottles can be returned in the carrier to a point of sale with the upper part 74a of the medial partition
15 structure serving as a handle (Figure 11).

The basket type carrier shown with reference to Figures 12 to 20 is of similar construction to the carrier described above, except in the following substantive respects, and like parts thereof are designated like reference numerals with the
20 addition of the suffix '2'.

Base panels 214 and 218 incorporate known locking means and because of the absence of upper panels 24, 38 (of the previous embodiment) the carrier of Figures 12 to 20 is loaded from above after the base panels 214 and 218 have been overlapped

(10)

and locked together. The only other significant differences apart from dimensional changes are that the handle structure has no reinforcing panels such as panels 32, 34 and 46 of the previous embodiment and there is no top cover panels (such as panels 24, 38) to close the top of the carrier.

(11)

CLAIMS

1. An article carrier (C) of the basket type adapted to accommodate a plurality of articles, such as bottles (B), comprising a base (14, 18), opposed side (12, 20) and end walls (50, 52; 82, 84), an internal medial partition structure (74, 78) and handle means (H) by which the carrier can be lifted and carried, said articles being receivable on both sides of said medial partition structure of the carrier, wherein a securing flap (114, 116) hinged to the medial partition structure is secured to an end wall (84) of the carrier to create a joint between said medial partition structure and that end wall and wherein said medial partition structure is formed from a pair of medial partition panels (74, 78) hinged together along a first fold line (80) and wherein the first fold line is disposed inwardly of the carrier from said end wall relative to a second fold line (118, 120) by which said securing flap is hinged to one of the pair of medial partition panels.
2. A carrier according to claim 1 wherein the first fold line is disposed between opposed end edges of the said one of the pair of medial panels and the second fold line is disposed along one of the opposed end edges of that said one medial partition panel.
3. A carrier according to claim 2 wherein the first and second fold lines are disposed in parallel with one another.

4. A blank for forming an article carrier of the basket type, which blank comprises a series of main panels hinged one to the next for forming the side panels (12, 20), and the end panels (50, 52; 82, 84) of the carrier, a base (14, 18) and a handle structure (H) and wherein the blank includes at one end thereof panels (74, 78) to
- 5 form a medial partition structure of the carrier. said panels comprising a first medial partition panel (74) from which is struck transverse partition panel means (81, 83) to be secured to one side wall (20) of the carrier and a securing flap (114, 116) hinged to one end of the first medial partition panel, a second medial partition panel (78) from which is struck transverse partition panel means (122, 124) to be secured to the other
- 10 side wall (12) of the carrier wherein the first and second medial partition panels are hinged together and wherein the second medial partition panel and its transverse partition panel means is partially struck from the first medial partition panel.



INVESTOR IN PEOPLE

Application No: GB 0125747.6
Claims searched: 1 to 4

Examiner: Mike Henderson
Date of search: 28 February 2002

Patents Act 1977 Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.T): B8P (PE1A PE1X PE2A PK3)

Int Cl (Ed.7): B65D 71/00

Other: ONLINE:WPI,EPODOC,JAPIO

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
A	GB 2201950A (THE MEAD CORPORATION) (See flap 33)	1 to 3
X	US 4217983 (STOUT) (See tab 67)	

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

THIS PAGE BLANK (USPTO)

•
•
•